THE VETERINARY RECORD

A Weekly Journal for the Profession.

No. 331. SATURDAY, NOVEMBER 10, 1894. Vol. VII.

"Fouling the Nest."

Never has the old proverb "It's a dirty bird that fouls its own nest" been more aptly illustrated than by the combined attack upon the veterinary profession which opened with the month. The first shot was fired in a Scotch agricultural paper. Then *The Standard* was made use of, and a correspondent who, with more wisdom than honesty, hides his identity behind the signature "A Guardian" led the attack. On another page the whole correspondence will be found, and we leave our readers to form their own opinion of the malicious lies so daringly foisted upon a leading daily paper. We all have a perfect right to express our opinions on the domestic affairs of the profession. We have special periodicals in which this may be done; we have meetings of societies all over the kingdom at which discussion is invited and at which are to be found audiences able and willing to sift statements and draw conclusions. To take our domestic differences into the lay press is an injurious proceeding, and especially detrimental when the object is to mislead the public and to smirch the profession.

It will be noticed that "A Guardian" concludes both his letters with the question "Cannot a new diploma-granting body be called into existence, since the Royal College of Veterinary Surgeons has failed in its duty to stock-owners, parents and guardians, and the public at large?" It would be an easy matter for the Government of this country to create other diploma-granting bodies and there would be a full justification for their so doing if the College had "failed in its duty." This is the sole point, and not one word of evidence has yet been produced in support of it. Fortunately this lying witness has appealed by name to men whom he supposes will support his statements. He mentions Sir Henry Simpson, Professor Brown, C.B., Dr. Fleming, C.B., Colonel Lambert, C.B., Professor Axe, and Professor Pritchard. Let these gentlemen speak for themselves. They may not approve every reform in every detail, but will they say "The Royal College of Veterinary Surgeons has failed in its duty to the public?" We know they will not—*with one exception*. This exception is the Editor of *The Veterinary Journal*, and his leading article in the November issue shows that he and "A Guardian" are in agreement, if not actually in working combination.

The first part of this remarkable article asserts that the new four-years course will first ruin the schools and then the College. In support of this tragic prophecy some second-hand statements as to the number of entries of new students at the four schools are quoted. Why do the schools remain silent if they are injured? Is it wise of them to let their grievances be put forward incorrectly and with such inexact qualifications as "from information received," "there may have been," "if it be true," etc. The schools are quite able to protect themselves, and two of them have spoken out publicly. Professor M'Fadyean of the London school has approved the four-years-course and the matriculation examination. Professor Mettam of the Edinburgh school has denied the falling off of students. That they are better informed than Dr. Fleming or his assistant advocate "A Guardian" is certain.

The tone of the article in *The Journal* may be judged from the following quotation.

"Not only has the action of the Council now brought the schools face to face with ruin, and involved the Royal College itself in that disaster unless more wisdom is displayed than has been exhibited for the last four or five years, but grave injury has been done to the profession itself by the meddling and muddling of the Council with the Fellowship degree. The blundering Charter deprived it of half its vitality, and the wiseacre who drew up the new regulations for its obtainment robbed it of the other half. There has not been an examination this year nor is there likely to be again; for it may be asserted that there is no inducement now for members to work and pay for the degree." The ignorance displayed by this nonsense may possibly be accounted for by the fact that Dr. Fleming has retired from any active connection with veterinary matters, but such an explanation is no excuse. He ought to know that every act of the Council to which he objects has been insisted on by the whole profession. He ought to know that there are men who may be inclined to work for a higher degree without the inducement of pay or profit.

The article next proceeds to show that a liberal education is not necessary for veterinary surgeons, because whereas doctors enter their patients bedroom veterinarians enter the stable, cow-house or piggery. Surely everyone knows the difference of treatment meted out to an educated man and that given to the common and vulgar, whatever his calling. If only for the material advantages of treatment and emolument which accompany education and intelligence we should all welcome a fair standard being required of our graduates. The standard in force is most modest, and no more than is necessary to prevent hardship to students who enter on a course of scientific study which they cannot expect to understand or master if destitute of common scholastic training.

The latter part of Dr. Fleming's tirade against the profession is not so much argumentative as

abusive, but there are one or two points worth referring to. It is assumed that because horse owners are becoming wiser that fewer veterinary surgeons will be required in future. Are not human beings all becoming wiser? Has the demand for physicians and surgeons decreased? Is it not a fact that with increased knowledge on the part of clients quackery suffers whilst talent is recognised? We have no doubt whatever that the improved education of veterinarians will be followed by a higher public appreciation, and that if we had remained content with the standard fixed some fifteen years ago our profession would have commenced its decadence. Not a change has been made in the regulations of the College that has not been thoroughly considered in all its bearings. No change has been made except on the conviction that it was necessary for the public protection and for the professional welfare. To describe the work of the Council during the past three or four years as "meddling and muddling, tinkering and tampering, and needless or senseless talking" is as true as it is civil. Of course it only means that its author does not approve of what has been done. His approval was not expected, and his disapproval will have no effect. Not unnaturally he objects to "changing everything that had been already wisely planned and established" when his own hand did the planning. Unfortunately the old order of things had miserably failed, and such discontent existed that the whole profession decided against its continuance with an unanimity never shown before. To say that the action of the profession was based upon a selfish and mercenary motive is a gross libel. The changes effected were necessary to keep in touch with the progress made by every other calling, and time will show that the domestic reforms carried out by the Royal College of Veterinary Surgeons were based on wisdom, and were not suggested by any tactical exigencies.

The attack in *The Veterinary Journal* and *The Standard* cannot be ignored. It is premeditated and organised, and doubtless is only the commencement of a campaign which will be conducted, as it has been opened, by misrepresentation and an absolute abandonment of conscientious scruples. One thing we may claim for the graduates who now enter our profession — that if they do not possess classical scholarship they will have sufficient intelligence to avoid the pretence of it. Their Latin will not permit such displays as "*Laryngismus paralitica*" or their Greek of such a "[*H*]*oi polloi*."

CASES AND ARTICLES.

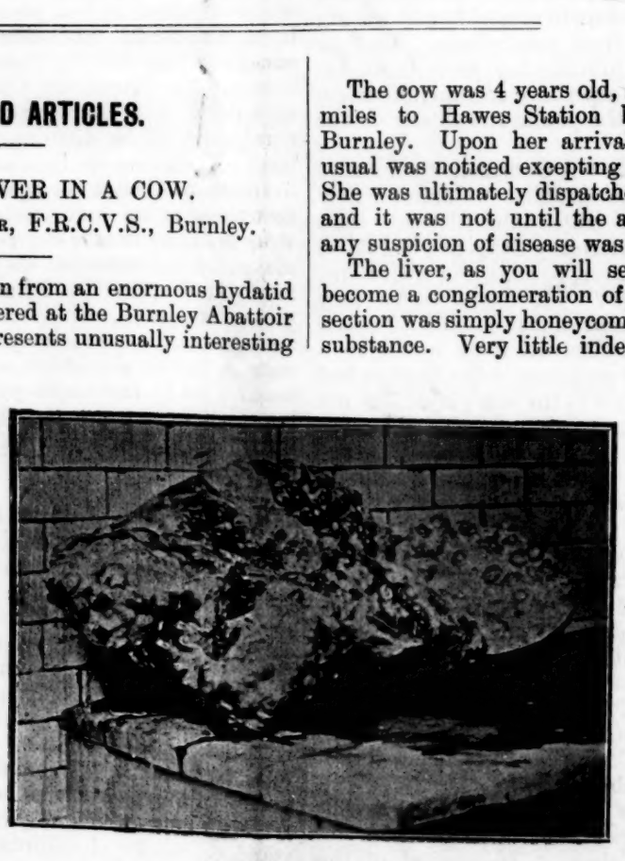
HYDATID LIVER IN A COW.

By Joseph H. Carter, F.R.C.V.S., Burnley.

I enclose a photo. taken from an enormous hydatid liver from a cow slaughtered at the Burnley Abattoir a few weeks ago. It presents unusually interesting features which may be worthy of publishing in your valuable *Record*. I append you a few particulars respecting the behaviour of the beast prior to being slaughtered.

The cow was 4 years old, and travelled by road 16 miles to Hawes Station before being trucked to Burnley. Upon her arrival nothing whatever unusual was noticed excepting her very wild behaviour. She was ultimately dispatched in the usual manner, and it was not until the abdomen was opened that any suspicion of disease was aroused.

The liver, as you will see from photograph, had become a conglomeration of hydatid cysts, and upon section was simply honeycombed throughout its entire substance. Very little indeed of the original structure to be found. It scaled the enormous weight of 110lbs. The lungs of the same beast were also badly affected with the same disease, and weighed 46lbs. Needless to say the carcase was condemned.



SYMPTOMS OF URÆMIC POISONING.

I send you the following account of a case which recently came under my notice in the hope that it may be of interest to your readers.

Without entering more minutely into the previous history of the case, let me say that for three days previous to death the following were the symptoms constantly shown by a patient, the subsequent post-mortem of which revealed rupture of the bladder, it is interesting to state, however, that the horse was decidedly not well for at least seven days previous to these pronounced symptoms, and in the end he was shot.

The patient was an aged chestnut gun horse, and these were the symptoms exhibited: The pulse averaged about 40 beats and was thready, the temp. ranged between 101 and 103dgs., the membrane of the eye was intensely injected, and the animal was completely off his feed. The bowels were completely inactive, and when relieved by enemas the fæces had a most abdominal smell, the smell too was very pronounced from the mouth.

The horse stood with his head hanging in a corner, the nose almost on the ground, and the breathing, which was stertorous, could be heard yards away from the stable, the pupil of the eye was widely dilated, and the surface of the cornea insensitive to touch, in fact the horse was in a state of profound coma. The surface of the body at one period of the day would be quite dry, and at another patchy sweating about the flanks was very noticeable.

Oftentimes he put himself into the position to stale, and on two or three occasions he did succeed in passing a little urine; the way in which it came was instructive, there was one splash just as one might make by placing a finger over the mouth of a pretty wide water tap and then turning the water on; this was accompanied by much straining and groaning, and the urine had a very high ammoniacal odour. The day before he was shot the off hind leg became much inflamed and swollen, no doubt from the infiltration of urine into the tissues of the leg, and as the case was hopeless I advised having him shot, which suggestion was next morning carried into effect.

Post-mortem appearances. On cutting into the abdomen the first thing noticed was the escape of a considerable quantity of urine, there was diffuse peritonitis, and an examination of the bladder revealed a rent on its supero-lateral aspect extending from the base almost to the apex, the edges of the rent being quite rounded and showing no signs of recent hœmorrhage.

Remarks. In connection with this case I should like to know how long a horse is capable of living after rupture of the bladder before signs of uræmic poisoning manifest themselves. Whether it is at all common for the horse to pass water after such an accident, and finally whether the symptoms recorded in such cases are at all constant.

"C. M. R."

Tunga Camp, Pondoland, South Africa.
Sept. 19th, 1894.

AN UNRECOGNISED PATHOLOGICAL CONDITION.

On October 29th a roan cart mare, about nine years old, came into our yard for treatment. She had come five miles, and presented the following symptoms: Was very dull, pulse 66, soft and weak, temp. 105dgs., flank very hollow. The man said she coughed once or twice coming in, and that she had had influenza a short time back but went to work again about a week ago. Both hocks were swollen, no discharge from nostrils, and the visible mucous membrane only slightly injected, the breathing was slightly quickened. We kept the mare, gave a drink containing:—

Liq. Ammon. Acet.
Sp. Ether Nit. a.a. ʒi.

which was repeated every six hours, and also applied mustard to throat and breast. Appetite fairly good.

October 30th. The temperature had fallen to 102dgs., but no other change to be noticed in the symptoms. Continued the medicine.

October 31st. The temp. still 102dgs. and pulse 66, she moved very stiffly, Continued the medicine, and also gave a drink consisting of

Ol. Lini. Oss.
Sp. Ammon. arom ʒi.

as we were unable to discover any action of the bowels.

Nov. 1st. Mare found dead in the morning. Post-mortem made a few hours afterwards, and presented a most marvellous appearance, in fact neither of us had ever seen such a case before.

The Schneiderian membrane and the whole mucous membrane of the head was intensely injected, and in fact nearly black (which was not visible during life). These black patches occurred all through the muscular tissue and vital organs. A large clot found in the right ventricle of the heart to our minds was the cause of the sudden death. We forwarded portions of the lungs and muscular tissue, also the heart, to Professor McFadyean, who replied at once that after a careful examination he was unable to throw any light on the case, and after a microscopic examination he left it to be vaguely classed with the septicæmias.

We may say the butcher used the expression "black farcy" for the condition we found. Neither of us having heard the expression before perhaps some of your correspondents may enlighten us.

A. L. Gibson, C. Crowhurst, } M.R.C.V.S.

Upper Priory, Birmingham.

An Outbreak of Foot and Mouth Disease.

The Secretary of the Board of Agriculture has telegraphed the following instructions to local authorities in country districts:—

"Foot and mouth disease has been detected at Rainham, Essex. Please warn all concerned; and direct that Police make careful inquiry with view to immediate reports being made to Board. In case any suspicion of outbreaks occurring among live stock the utmost vigilance shold be exercised." We have heard no news of any spread of the disease.—*Perthshire Courier.*

METHOD BY WHICH IMMUNITY IS ACQUIRED AGAINST INFECTIOUS DISEASES.

Translated by F. Hobday, M.R.C.V.S.

Vaccines and the Application of Serum to the Cure of Disease.

On the Antitoxic Serums, by E. Roux, of the Pasteur Institute.—On Immunity from Infectious Diseases, by Metchnikoff, of the Pasteur Institute.—Immunity and methods of attaining it, by Hans Büchner, of Munich. (Communications read before the Congress of Hygiene at Buda Pesth.)—Contributions to the study of tetanus, treatment and prevention by antitoxic serum, by Roux and Vaillard, (Records of the Pasteur Institute, February, 1893.)—Contributions to the study of the venom of serpents, method of rendering animals immune (Records of the Pasteur Institute, May, 1894.)

It is possible to vaccinate men and animals against infectious diseases by different methods, which all produce the same result but by different ways—the effect being to render the subject resistant to the infectious virus.

M. Pasteur has rendered animals immune against anthrax by inoculating them with an attenuated and harmless virus. He has rendered man immune against rabies by inoculating him with progressive doses of the rabid virus.

These two methods are very analagous, and I think that theoretically they are absolutely identical. They cause the subject to become accustomed to the violent virus by the previous absorption of a weak virus. This manner of becoming accustomed to the infectious virus is like acquiring a tolerance of chemical poisons. It is probable that the intimate mechanism of this tolerance is the same for all the microbic poisons. For anthrax, M. Pasteur inoculates under the skin of the larger animals a preliminary culture of anthrax virus, extremely attenuated by the action of heat and air, this culture being incapable of killing even a guinea-pig. Then he inoculates a culture a little less attenuated, termed the second vaccine, which is capable of killing guinea-pigs but which is harmless to sheep and cattle.

After this second inoculation the animal becomes immune against the introduction of the most violent virus of anthrax.

As to rabies, M. Pasteur renders man immune against this fearful disorder by injecting under the skin preparations of the spinal cords of rabbits to whom he has previously given the disease by inoculation of the rabid virus under the dura mater. These spinal cords are suspended in jars containing chloride of calcium. They become dried up in the air and gradually lose their virulence. He injects at first the oldest cords, then progressively the fresher ones, and the treatment becomes a success when the inoculation, by the absorption of progressively stronger doses of the virus, has taken effect before rabies has had time to be developed in the patient. This treatment of rabies is not, properly speaking, a curative, but a preventive one.

It does not destroy the poisonous elements of the rabid virus in the man, but causes him to become accustomed to the effects of the poison before it is spread over his whole system.

This manner of acquiring tolerance has with some variations, been applied to animals against a large number of diseases, particularly against diphtheria, tetanus, and snake bite.

It is possible to render animals immune against diphtheria and tetanus according to the method of M.M. Roux and Vaillard by inoculating them with diphtheritic or tetanic cultures separated from their microbes by filtration, and mixed with decreasing doses of iodine solution which weakens the virulence of the poison secreted by the microbes.

M. Kaufmann (Professor of Therapeutics at the Veterinary School, Alfort,) M.M. Phisalix, Bertrand and Calmette have rendered animals immune against the venom of the viper by injecting gradually increasing doses of fresh venom at intervals, or heated to 80dgs. The study of the blood of animals protected against these three infections has demonstrated that the serum, that is to say the liquid part of the blood, is at the same time a vaccine and a mechanical remedy against them.

Does this serum, protective and curative, act like the Pasteur vaccines, by accustoming the system to resist violent and venomous poisons? or is it a true destroyer of these poisons? Does the serum act as an antidote, or does it act indirectly in the same way as an attenuated virus? I think that immunity, acquired by vaccination or by the use of serum, is always caused by a tolerance of the system to virulent poisons.

I think that the serum capable of curing tetanus, for example, contains in small quantities a substance like, or very analagous to, the tetanic poison which the inoculated animal has absorbed in increasing quantities. In support of this opinion I rely upon an experiment of M.M. Roux and Vaillard. These two experimenters have inoculated into the peritoneum of a fowl a large quantity of tetanic poison. As the fowl is naturally refractory to tetanus it did not become ill. But during the three or four days following the inoculation the blood of the fowl is toxic, it will give tetanus to mice in a similar manner to the way that the anthrax vaccine gives anthrax to guinea-pigs. Then the poison disappears, at least in a great measure, and about the fourteenth day the serum furnished by the fowl manifests an energy which is able to prevent and cure tetanus.

This experiment brings up numerous thoughts.

First, Why is the fowl naturally refractory to tetanus? Why, you will also ask, are the dog and the monkey absolutely refractory to the tuberculosis of birds? Why are fowls absolutely refractory to the tuberculosis of mammals? Do these animals possess normally in their blood the antidotes of the poisons of tetanus and avian tuberculosis? or have they become used to these poisons by atavism, or by successive absorption of virus at some periods time back? Does this tolerance allow their system to secrete these antidotes when infection requires it?

These are questions which our actual present knowledge does not permit us to solve.

But what this experiment tells us is that in ten days the virulent blood becomes curative blood. This blood which killed, cures. Life has then acted upon it in a similar manner to which heat and air acted upon the anti-anthrax vaccine of Pasteur. Can one consider that these two different methods have changed the poison into an antidote? Is it not rather more reasonable to suppose that the system has manufactured an attenuated poison which has permitted the establishment of a tolerance? It is not an antidote but an enfeebled poison.

This slight chemical modification changes the poison, which would act like a blow from a club, into a substance which is occupied in attending to and defending the system.

If the inoculation had as its result the transformation of the tetanic poison into an antidote, it would be necessary incessantly to inject small quantities of this poison in order the blood of the inoculated animal should remain antitoxic.

But M.M. Roux and Vaillard have shewn that this was not so, and that there was no relation between the tetanic toxine injected and the antitoxine produced in the blood. If this relation existed, and the animals inoculated against tetanus be bled often, the provision of the antidote ought to be rapidly exhausted. But this is not the case.

M.M. Roux and Vaillard have withdrawn in a very short time, from a rabbit made immune against tetanus, a volume of blood equal to the total volume of that which circulates in his body, without lowering the antitoxic power of his serum. Then, if the serum contains an antitoxine, this antitoxine is not produced by the changes produced in the toxine, but by the system accustoming itself to the manufacture this antitoxine. It is precisely this last hypothesis which is now maintained by M.M. Bouchard, Metchnikoff, Roux, and Büchner.

According to these eminent experimenters, the microbes and their poisons, when they are received by the system in small doses, have the effect of arousing the activity of the tissues and, above all of the white corpuscles of the blood, which defend themselves against these invaders and secrete a substance which neutralizes the poison.

It seems, says M. Roux, that the toxine acts like a stimulus on the cells which secrete the antitoxine. But it is necessary to add that even when this toxine has disappeared from the system the cells which have been influenced by them continue to secrete this substance, no longer exactly antitoxic, but charged with reinforcing the defensive and protective properties of the cellular elements.

It is even very probable that these defensive substances are normally secreted in small quantities by the system, and that the effect of inoculation is to develope these secretions. In short, the normal serum of the blood is an unfavourable soil for some microbes, as has been shewn by Büchner.

Perhaps, in people of strong constitution, even this secretion itself is sufficient to ward off some infections.

Perhaps the best way of avoiding illnesses is, to look well after oneself and one's energy by a sound hygiene which puts all the cells of the system in a position to resist the invasion of the poisons which surround us.

It is certainly the most practicable means of rendering oneself invulnerable against the great majority of infectious diseases, because it is impossible to cause us to be vaccinated against *all* the contagious effections which threaten us. Happily this reinforcing of the system by a vaccine which acts as protection against danger sometimes proves to be a shelter against several contagions.

The cells armed against one enemy are also prepared against another.

Professor Bouchard has observed that a rabbit rendered immune against the bacillus of blue pus is also immune to the virus of erysipelas.

M. Duntschman has stated that the serum of animals rendered immune against symptomatic anthrax acts on the bacillus of acute septicæmia; in the laboratory of M. Metchnikoff, Mr. Latapie has observed that the serum of guinea pigs which have been inoculated with the bacillus of Kiel (a chromogenic organism from certain river water) is very efficacious to prevent choleraic peritonitis.

Serum from a healthy horse, mixed with the venom of the cobra, in no way prevents its action, but serum from a horse protected against tetanus renders the venom which is added to it innocuous.

This antitetanic serum, injected before the venom, greatly lengthens the time before death takes place, and even prevents it if given in repeated doses. There is, however, very little resemblance between the venom of serpents which kills by asphyxia in a very short time and the tetanic poison which only manifests its action after a period of incubation. The serum of fresh guinea-pigs has no action on the venom, that of guinea-pigs inoculated against rabies is anti-venomous in a very high degree. When mixed with the venom in a glass it becomes inoffensive; injected as a preventive measure it protects against the poison.

Rabbits inoculated against rabies support 4 or 5 times fatal doses of venom.

Is it not surprising to observe that, by rendering a rabbit refractory to rabies, one gives it at the same time immunity against snake bite?

These very interesting experiments of M. Roux shew that the antitoxic serums are not chemical agents which *chemically* destroy poisons or venoms. I know very well that some will object to the famous experiments of Behring and Kitasato. These two experimenters placed in a vessel 900 parts of a solution of tetanic toxine of which 1/1000 part of a cubic centimetre would kill a mouse. Then they placed in the same vessel a portion of the serum of an animal rendered immune against tetanus. About half a c.c. of this mixture can be injected into a guinea-pig without giving it tetanus, although it only includes 18/100 part of c.c. of serum. At first sight, the toxine of tetanus would appear destroyed or neutralized by the antitoxine of the serum from the immune animal; it appears as if

a healthy *base* has come to neutralize an unhealthy *acid*, forming an inoffensive *salt*. It has nothing unusual in its appearance, and the experiments of M.M. Roux and Vaillard shew that the toxine and the so-called antitoxine remain side by side in this mixture. They injected in 5 guinea-pigs 9 half c.c. of the mixture (toxine 900 parts, serum 1 part); none of them took tetanus.

To 5 other guinea-pigs of the same weight and in the best of health but who have been rendered immune sometime before against cholera, they gave the same mixture and the same dose. Tetanus resulted.

Guinea-pigs which receive at first a centicube of protective serum (of which a trillionth part is active) that is to say a quantity capable of rendering them immune thousands of times, and then a fatal dose of the tetanic toxine, shew no ill effects under ordinary conditions.

Several amongst them will take tetanus if afterwards injected with some microbic product. A quantity of antidiphtheritic serum, amply sufficient to preserve fresh guinea-pigs against a fatal dose of virus or of toxine, does not retard the death of guinea-pigs of the same weight who have previously been inoculated with microbic poisons even although they have perfectly recovered.

It is then quite clear that the toxine of tetanus, or of diphtheria, is not destroyed by an antitoxine developed in the serum of the animal inoculated.

The toxine always remains, since it is able to cause tetanus in animals whose power of resistance has become weakened.

Immunity is then acquired, not in a chemical manner, but by a complex adaptation of the organ to the microbic poisons.

The serum of the vaccinated animal contains protective substances against the bad effects of the poison. It does not lose these properties when injected into another animal or a man. As it contains protective substances, something like tonics and stimulants of the organism, the cells are forced by its presence to continue to secrete these protective substances.

They possess rapidity, the power of tolerance and of becoming accustomed to it.

We are now able to admit that vaccination by the attenuated virus, or by the treatment with prepared serum, is always a certain protection to the system previously prepared by having obtained tolerance against the virus.

This security becomes lessened when the system has been weakened by fatigue or by previous illnesses. The cells are no longer active; they no longer reply to the stimulus of the weakened toxines; they do not accustom themselves to small doses of poison.

The vaccines disappear and the toxines remain; or rather the ones are added to the others in order to cause a fatal effect. Let us then take care if we do not wish to lay ourselves easily open to infections.

But, on the other hand, certain normal serums naturally possess refractory powers for the subject who owns them, or confer immunity without any preparation to the subjects in whom they are inoculated.

Besides, the serum of a healthy man and sometimes also that of the horse, as M. Pfeiffer has shown, have very marked properties for conferring immunity against intra-peritoneal cholera. It seems then that this preventive power of the serum against living virus is not specific, inasmuch as one meets with it in animals who have never experienced the action of the microbe against which their blood confers immunity. This is not very surprising because, according to M. Metchinkoff, it does not act by its power as an antitoxine, but by its power as a stimulant which excites the function of the cells.

We are able then to vaccinate ourselves by rendering the cells of our body sufficiently vigorous to destroy the poisons which are able to attack us. Do not let us forget that the absorption of one poison prepares us so that we cannot resist another chemical or microbic poison.

M. Robert Wurtz has shown that animals poisoned by arsenic had their organs invaded by the microbes of intestinal putrefaction, who normally remain confined to the digestive tract. Life is a struggle between the organic cells and the chemical or microbic poisons.

When the poisons are the masters, the microbes arrive and invade everywhere.

As we have some difficulty about ascertaining whether we are liable to attacks from the diphtheritic poison, M.M. Roux and Lœffler advise people who are in close contact with diphtheritic patients, (such as doctors, nurses or parents) to allow themselves to be inoculated subcutaneously with serum from a protected horse.

It is well to know, too, thanks to the researches of eminent scientists and to those particularly of Dr. Hutinel (the distinguished doctor of the hospital for poor children) that the saliva of persons cured of diphtheria preserves for a long time diphtheritic bacilli which are no longer virulent for the patient who carries them, but which are able to convey the contagion to subjects who have never had diphtheria. Thus, children who have had diphtheria ought not to return to school until their saliva has been examined.

Finally we may add, that as soon as the false membranes appear or respiration becomes difficult, it is necessary to inject 20 c.c. of the serum of an animal inoculated against diphtheria; then nearly all the patients would be cured whilst to-day more than half die. This splendid result has been obtained by a long series of patient investigations.

Klebs discovered the bacillus which causes diphtheria. Then Loeffler shewed that this microbe, discovered by Klebs, was really the specific cause of the diphtheritic invasion and the production of false membranes.

Afterwards Roux and Yersion proved by some very beautiful experiments that the diphtheritic bacillus could produce a poison, a toxine, and that this poison was that of the diphtheric infection.

At length a large number of experimenters, M.M. Roux, Voillard, Fraenkel, and Behring, protected animals against diphtheria by inoculating them with progressively increasing doses of the diphtheritic

poison, either pure or weakened by chemical treatment.

During this time the foundation of the doctrine of immunity by blood serum treatment was laid.

It commenced with the experiments of Maurice Raymond on the blood of calves inocluated with cow-pow, and those of M.M. Richet and Héricourt on the serum of dogs and rabbits protected against a special form of septicæmia.

But its importance was only perceived after the works of M.M. Behring and Kitasato on tetanus and diphtheria. The blood serum treatment gives us an efficacious remedy against this terrible disease.

Here we see how, by successive steps and slow stages, German and French science has commenced to discover the real and definite remedy against diphtheria.

This discovery opens up to us a bright future, and leads us to hope that in time, with the persevering energies and efforts of all scientists, we shall be able to overcome with efficacious and almost infallible remedies the diseases which still devastate humanity, such as tuberculosis, typhoid fever, and pneumonia. Little by little the practice of medicine will be transformed —the art will become a science.

'Tis true that a Pasteur, who, with one thought, clears away the thick clouds from the obscured horizon and shews us the blue sky beyond, is not found every day.

Dr. G. Daremberg,
Journal des Debats.

TORTION OF UTERUS AND DROPSICAL KIDNEY.

By J. E. Miller.

On the 3rd of this month a neighbouring farmer sent at 7 a.m. for me to look at a heifer which had refused eating. When I got to the farmstead I found in a loose-box a three-year-old, due with her first calf. She was feverish, and the owner said was a week over the time, and he had noticed her udder gradually going down after flushing. The animal had been out in the lanes during the day with other cows, and the man attending them noticed her straining and thought she wanted to calve, but nothing came from her except water. No more notice was taken of her until she refused her food, and it was seen that the udder was going down and she was getting off in condition. I had her tied up, and made an examination *per vaginam*. On reaching the neck of the womb I found it twisted towards the right side of the animal, the *os uteri* just sufficiently dilated to admit my hand I found the calf below, fully developed but dead, and the placental fluids all absent. I then had the animal thrown and rolled over in the opposite direction by means of casting and pressure, but could not reduce it in any way. I advised slaughter.

The animal was sent to a butcher, and on *post-mortem* the twist was as described. The kidney was almost the size of another calf; I can come to no other conclusion than that it caused the twist of the womb. It was full of straw-coloured fluid; the true kidney tissue was much atrophied, no doubt owing to the pressure of the fluid within.

The owner was pleased that we slaughtered the cow, because, as he said, the capsule must have ruptured soon even if we had reduced the twist and succeeded in removing the calf.

INVERSION OF THE BLADDER.

By G. Yates, Pupil to W. A. Hurrell, M.R.C.V.S., Southminster, Essex.

We were requested to attend a mare supposed to have inversion of the uterus. On arrival we found her down and very much exhausted, pulse 100. Respirations accelerated. Administered a stimulant and cleansed the inverted part, which was found to be the bladder, and which was very much thickened and congested. We then dressed well with ol. carb., and with the aid of a solution of belladonna the inversion was returned. Sutured the labiæ and administered another stimulant combined with ether. The mare died during the night; we were unable to make post-mortem examination.

VETERINARY SOCIETIES

ROYAL VETERINARY COLLEGE MEDICAL ASSOCIATION.

The 196th general meeting of the above Association was held in the New Theatre of the College on Wednesday, October 24th, at 6 o'clock p.m., Mr. A. L. Farrent in the chair. In the absence of the Assistant Secretary, the Hon. Secretary was called upon to read the minutes of the last meeting, which were duly approved and signed.

The Hon. Sec. then read out the list of medals to be awarded by the Association to the different classes during the forthcoming session as follows:—

Open to classes A. B. and C.—Two medals to be given for the two best essays read and defended before meetings of the Association.

Open to class A.—A medal to be awarded for the best written examination on botany, chemistry, and minor anatomy.

Open to class B.—A medal to be awarded to the winner of a dissection competition.

Open to class C.—A medal to be given for the best written and oral examination on all the subjects of the class curriculum.

Professor Hobday exhibited a most interesting post-mortem specimen of fracture of the lumbar vertebræ of a horse, the fracture being sustained whilst being cast.

The Presidential address was then delivered by Prof. Hobday, introducing for discussion "The present and future prospects of the veterinary student." The address proved to be most interesting. Commencing with the different points to be considered before entering the profession, the natural adaptability of the student, and the pecuniary side, and the different stages until leaving College were all dealt with. The question of pupilage, whether beneficial or not, was gone into at some length. The different courses open to the qualified man were

each entered into fully under the headings of Civil practice, the Army Veterinary Department, the Colonies, Government appointments, and the Schools. The different sides of each one were brought forward, as also were their advantages and disadvantages. The address was brought to a close by the President stating that he believed that a very bright prospect was before the profession.

A very animated discussion ensued in which the following gentlemen took part: Prof. McFadyean, Messrs. Dowell, Houston, Gazi, Saunders, Farrent, Miller, Standley and Robertson.

With a hearty vote of thanks to the President the proceedings terminated.

The 197th general meeting was held on Wednesday, October 31st, at 6 o'clock p.m., Mr. Dunstan took the chair. There was a fairly good attendance of members.

Mr. SAUNDERS read a most interesting paper on "The Evolution of the Horse." After referring to the various theories that have been advanced relating to the subject of evolution, the essayist gave a brief history of the horse's ancestors, starting from the tertiary period. After giving a description of the Phenacodus, the five-toed ancestor of all the ungulates, he referred to the Hydracotherium possessing four digits in each anterior, and three in each posterior limb; then to the three-toed Thesohippas and Hipparion, finishing the series with the Hippidum and the modern Equus. In conclusion he dealt with the many modifications which have taken place in the formation of the teeth, and the causes which brought them about during the period in which the digits were being reduced in number. The essay was illustrated by a number of admirably executed drawings from the pen of the essayist.

A slight discussion ensued in which Professor Hobday, Messrs. Dowell, Boyer, Houston and Dunstan took part.

A vote of thanks to the essayist and to the chairman closed the meeting.

WALTER BURT, *Assist. Sec.*

NATIONAL VETERINARY BENEVOLENT AND MUTUAL DEFENCE ASSOCIATION.

A son of the widow of an Army veterinary surgeon is—on the nomination of the above Association—the recipient of the Free Studentship at the New Veterinary College, Edinburgh, kindly granted by Principal Williams.

SAM LOCKE, *Hon. Sec.*

Manchester.

'CASES' FOR EXAMINATION.

ROYAL COLLEGE OF VETERINARY SURGEONS.
10 RED LION SQUARE, S.W.

DEAR SIR,

I shall be glad if you will kindly make the following resolution of the Council of the Royal College of veterinary Surgeons known in your journal.—Yours faithfully,

Nov. 7, 1894. A. W. HILL, *Hon. Sec.*

EXAMINATIONS.

"That in future cart-horses as well as other horses be provided at the Class 'C' Practical and that practitioners be invited to send any interesting case possessing well-marked defects."

EXTRACTS AND NOTES.

STUDENTS AT VETERINARY COLLEGES.

The following is taken from the Agricultural article which appeared in *The Standard*, Oct. 30th, 1894.

Attention is called by *The North British Agriculturist* to the great falling-off in the entry of students at the Veterinary Colleges, which is attributed to the raising of the preliminary examination to the level of that arranged for medical students, and the extension of the course necessary as a qualification for the V.S. degree from three to four years. Under the new regulations, it will cost about as much in time and money to be trained for a veterinary surgeon as for a doctor of medicine, and the remuneration usually obtained by the former is regarded as an insufficient reward. Thorough competency is important in a veterinary surgeon, no doubt, but it would be a mistake to train only such men as require higher fees than ordinary farmers can afford to pay. If well qualified veterinary surgeons are made too scarce, the dying race of "cow doctors" will be revived.

TO THE EDITOR OF THE STANDARD.

SIR,—In your Agricultural article in *The Standard* of Tuesday you call attention to the serious falling off in the number of students entering at the Veterinary Colleges in England and Scotland. The question is one on which the public should know the facts, seeing that the services of a good veterinary surgeons are indispensable to all owners of live stock, and that the supply is controlled by the Royal College of Veterinary Surgeons, the only body in the United Kingdom that can grant a diploma, without which no man may call himself a veterinary surgeon or practise veterinary surgery.

Some seven years ago an officer in the Army Veterinary Department started the cry that the veterinary profession was "overcrowded." The idea spread like wildfire, and the Council of the Royal College of Veterinary Surgeons soon became nearly full of new and unknown men, sent to legislate against "overcrowding." The outcome of their efforts is that no opportunity is given for students to see country practice, and they (the students) will pass on an average six years at the College before receiving their diploma, at an expense quite disproportionate to the remuneration they can hope to gain from country practice.

The examiners of these students are nominated by the Council, some for a very limited period, and well know they are the nominees of men who profess to believe the profession is overcrowed. The wish of the stockowner to have at his hand a capable, practical veterinary surgeon has been forgotten, and such men (useful country practitioners) must, under present conditions, become almost extinct. Cannot a new diploma-granting body be called into existence, since the Royal College of Veterinary Surgeons has failed in its duty to the public?

I am, Sir, your obedient servant,

A GUARDIAN.

October 31st.

The following replies have also appeared in *The Standard*.

TO THE EDITOR OF THE STANDARD.

SIR,—The attention of the President of the Royal College of Veterinary Surgeons has been called to a letter signed "A Guardian," which appeared in *The Standard* of the 2nd inst., and he has requested me to

reply to it on behalf of the Council. If "A Guardian" had been a little more careful to verify his statements, I am sure he would not have committed himself to the conclusion that "the Royal College of Veterinary Surgeons had failed in its duty to the public."

Let us take his statements as they come. He first quotes from your Agricultural Article, as a statement on your authority, but which is, in fact, as the writer of your article is careful to show, a quotation from the *North British Agriculturist*, "that there is a serious falling off in the number of students entering at the Veterinary Colleges in England and Scotland." I understand that the secretary of one of the Scotch Colleges has already written to the *North British Agriculturist*, denying this so far as his College is concerned. However this may be, it is very probable there may not have been so many entries at the Colleges this and last year as in the two previous years; but this would be accounted for by the fact that the new regulations requiring a four years' course of study, instead of three, only affected students entering after January 30, 1893, and the consequence was that there was a great rush to enter before that date, which would, to a certain extent, exhaust the supply of those who would have entered later in ordinary course. The statement that the Council was "nearly full of unknown men, sent to legislate against overcrowding," hardly requires contradiction. A glance at the annual list will dispel at once the illusion that the members of the Council are unknown men, and it is the first time in my knowledge that it has been stated that they were returned for such an object as to prevent "overcrowding."

Now for what the Council are supposed to have done: "No opportunity is given for students to see country practice." Students have the same opportunity of seeing country practice now as they have had for many years. "Students will pass on an average six years at the College before receiving their diploma, at an expense quite disproportionate to the remuneration they can hope to gain from country practice." Students have to study four years, instead of three, and the expense is only increased in that proportion. "The examiners of these students are nominated by the Council, some for a very limited period." These examiners are elected by the Council for three years in all cases (except, of course, where vacancies arising from death or otherwise have to be filled). "They well know they are the nominees of men who profess to believe the profession is overcrowded." The examiners are all men of high standing, both in their profession and elsewhere, as may be seen from the enclosed list, and the suggestion that they would so grossly neglect the high duty of their office, for the sake of holding the position, is one, I am sure, that "A Guardian" will at once withdraw, when he gives it a moment's consideration. Many of the examiners have been on the Court for years, and anyone who has been present at an examination cannot but have been struck with the kindness and consideration displayed to the candidates.

There are at the present time over three thousand members on the Register, and there is no reason to fear that the supply will be diminished in the future, or that stock-owners and the public generally will be unable to obtain the assistance of thoroughly qualified veterinary surgeons at moderate charges.—I am, sir, your obedient servant,

GEO. THATCHER,

Solicitor to the Royal College of Veterinary Surgeons.
10 Red Lion Square, W.C., Nov. 6.

TO THE EDITOR OF THE STANDARD.

SIR,—The letter of "A Guardian" in *The Standard* of to-day contains what are to me such glaring misrepresentations of a matter on which the public should be correctly informed, that I beg to be allowed space for a few remarks on it.

Your Correspondent states that "seven years ago an Army Veterinary Surgeon started the cry that the Veterinary profession was overcrowed," and that "this idea spread like wild-fire." Ideas are not easy to follow, "wild-fire" is not well defined. I do not propose to attempt to prove the negative. It is for "A Guardian" to show evidence that such is fact. I can only say that I have not witnessed the spread of the cry, nor observed any evidence of the "wild-fire;" neither do I believe there can be a public reason for the introduction of this "red herring." But "A Guardian" goes further, by saying the Council of the Royal College of Veterinary Surgeons soon became nearly full of new and unknown men, sent to legislate against overcrowding. That this is inconsistent with truth will, I think, be apparent, when it is known that, of the thirty-two members of which the Council is at present composed, there are the Principals of the four Veterinary Colleges, four Professors at the Colleges, a Governor of the Royal Veterinary College, the head of the Veterinary Department at Dublin Castle, an officer of the Army Veterinary Department, and the remainder practitioners in various parts of Great Britain and Ireland, all sufficiently known and appreciated to be elected by ballot by members of the profession scattered over the United Kingdom. That teachers of from ten to twenty-five years standing must be well known goes without saying, and without desiring to be invidious it may be stated that such names as FitzWygram, W. Hunting, Wragg, Simpson, Barford, Wheatley, Trigger, Lambert, of Dublin, and Peele are not unknown to the stockowning public. Decrease of students means dimunition of students' fees, and any marked and permanent decrease of students must prove disastrous to the Colleges, which notoriously are not rich, and, like the Royal College of Veterinary Surgeons, depend for their maintenance on fees received for teaching and examining.

The principal changes relating to students effected by the Council of the Royal College of Veterinary Surgeons during the past six years are the establishment of an uniform standard of matriculation, identical with that demanded by the General Medical Council for entrance to the medical profession, and the extension of the course of collegiate professional study from three to four years. In making these changes, I submit, without fear of contradiction, that the actions of the Council have been guided, in the first instance, by the conviction that a certain amount of scholastic learning is essential to making the best of such studies as, perforce, devolve on the veterinary student. In the second instance, the rapid advance of science, with its accumulation of valuable facts in connection with professional work, has demonstrated to the Council the impossibility of providing for the public the best veterinary surgeon, and, at the same time, of giving the student a fair chance of passing the necessary examination, without an extension of the course of study.

Whatever difference of opinion may exist as to the relative importance of their work in after life, it cannot for a moment be admitted that the difficulties to be overcome by students of veterinary medicine are inferior to those to be surmounted by the student of human medicine. Surely, the Council, composed of teachers and practitioners, should be competent to judge on these points. In all their deliberations, the making of practical veterinary surgeons has been the chief aim, and such unworthy motives as those attributed by "A Guardian"

are repudiated by the very actions to which he refers. Similar circumstances have affected the medical profession in changes carried out by them. The matriculation standard has been elevated and made uniform, the hospital course extended from three to five years. Will "A Guardian," the public, or any one connected with the practice of human medicine, say that we now suffer from lack of doctors in town or country, that the poorer classes are more neglected than heretofore, or that the knowledge and skill possessed by those of the present day are inferior to those of the older practitioners?

With an intimate experience of veterinary surgeons and students, I am of opinion that country practice, though less remunerative, is still most popular; that there is a greater demand for seeing country practice; and that the Council of the Royal College of Veterinary Surgeons use every means in their power, by proving by examinations previous to granting the diploma, that the candidate shall possess the essentials for carrying out all kinds of practice. That because a man is educated up to a certain standard he is less capable of being a practical veterinary surgeon, it would be absurd to suggest; that increased knowledge connected with rural life renders this distasteful to him, is equally untenable. In 1878 the course was extended from two to three years, and the fees raised, with the result of a marked increase in the entries. In those Colleges which have been credited with a higher standard of matriculation, I believe, there has always been the largest number of students. Up to the present time there has been no dearth of country practitioners. The present session has seen a decrease in the entries of students probably discounted by a "rush" in prospect of the changes; but, guided by previous experience, there can be no doubt in the minds of those really interested that the demand will regulate the supply, and the public interest will not suffer.—I am, sir, your obedient servant,

JOHN PENBERTHY.

Royal Veterinary College, N.W., Nov. 2.

The following letter appeared in *The Standard* of Thursday the 8th inst.

TO THE EDITOR OF THE STANDARD.

SIR,—The points I desired to make clear for the information of the public, when I addressed you regarding the new regulations of the Council of the Royal College of Veterinary Surgeons, were: that no regulations were in force for pupils to see country practice; that the average attendance of a pupil at College would be six years; and that the new regulations were the result of the outcry against the veterinary profession being overcrowded.

In Professor Penberthy's long reply I fail to see that any regulations whatever have been made by which students might see country practice (as a matter of fact, there are none); he does not question my statement that the average attendance of pupils will be six years, nor does he deny the outcry against overcrowding. Since writing to you a week ago I have trustworthy information, through the kindness of a well-known veterinary surgeon, of certain matters of sufficient interest to lay before the public. Dr. Fleming, C.B., Professor Williams, and Professor McCall have all publicly demonstrated the impossibility of working the new regulations.

The last-named gentlemen are Principals of two out of the four existing Veterinary Colleges in England and Scotland. The position of all the Colleges is most deplorable, owing to a lack of new pupils. One College has not received a single new pupil under the new regulations, another has nine only, and yet all the Colleges must maintain the full teaching staff, or no pupils of theirs can be examined. The estimated loss to these institutions in students' fees alone will amount to over one thousand pounds per annum, and may approach two thousand pounds.

In regard to the constitution of the Council—although it is not a subject such as to greatly interest the public, unless read side by side with Professor Penberthy's remarks—I learn that of the thirty-two members now constituting the Council of the Royal College, only seven have completed more than five years' service. The other twenty-five members have come upon the scene new, and unknown previously as veterinary legislators, and nineteen of these twenty-five have served two years or less. Those who have left the Council during the past five or six years for various reasons—some, I know, disgusted with the turn of affairs, others declining to pledge themselves to support the new doctrines—include such well-known men as Sir Henry Simpson, Professor Brown, C.B., Dr. Fleming, C.B., Colonel Lambert, C.B., Professor Axe, and Professor Pritchard.

I am also in a position to state that the Fellowship Degree has been tampered with, and its holders unfairly treated; and that, whereas the average entry for many years has been nearly twenty, not a single individual has been examined for the Degree during the present year. It is hardly necessary to add, the progress of a higher Degree indicates the real progress a profession is making.

Let me, in conclusion, once more ask, cannot a new diploma-granting body be called into existence, since the Royal College of Veterinary Surgeons has failed in its duty to stockowners, parents, and guardians, and the public at large?

I am, Sir, your obedient servant,

A GUARDIAN.

November 6th.

SHORT CROP OF VETERINARY STUDENTS

To the Editor of *The North British Agriculturist.*

SIR,—In your issue of 31st October you ask me to say whether on the 15th October more than nine new students had entered the Dick Veterinary College. Permit me to inform you that on the date you mention twenty-one new students had joined the College and enrolled as members of class A, and that in due time they will proceed to the professional examinations of the R.C.V.S.—I am, etc.,

A. E. METTAM.

Royal (Dick's) Veterinary College,
5th November, 1894.

THE ANTITOXIN TREATMENT OF DIPHTHERIA.

Sir Joseph Lister in a letter to the Editor of *The Times* says, The nature of the new treatment of diphtheria, by means of antitoxin, has been sufficiently explained to your readers. The evidence in its favour which comes to us from abroad is such as cannot be disregarded. Men of the highest scientific character in Germany and France, after giving the remedy an extended trial in various hospitals, have arrived, independently of each other, at the conclusion that, if applied in the early stages of the complaint, it is an almost infallible cure; while even patients coming under treatment at a late period of the disease and under circumstances which would formerly have been considered desperate, have been rescued by it from the grave.

One thing has been already clearly demonstrated

—viz., that this treatment is perfectly harmless, whether applied to a diphtheritic patient or to a healthy person; and, such being the case, it becomes the imperative duty of medical practitioners in this country to give a fair trial to means so full of promise.

But the preparation of the antitoxin is a process of the utmost delicacy, and the supplies hitherto obtained from the Continent, while very costly, have been quite inadequate in amount and also variable in quality. It is, therefore, a matter of the utmost moment that medical men should be able to procure this material from some absolutely trustworthy source in this country at a rate so reasonable that it can be employed without stint.

The Council of the British Institute of Preventive Medicine, fully aware that this most important subject comes fairly within the scope of the objects for which the institute was founded, resolved in August last to commence the preparation of the antitoxin. A perfectly satisfactory product has been obtained, and several patients have already been treated by means of it with results of the most encouraging character.

The Council now feel it to be their duty to proceed on a very much larger scale, so as to be able to supply the great and ever-increasing demand of British practice. And it may be remarked that the antitoxin is likely to be largely employed, not only for the treatment of persons already attacked with diphtheria, but also for the protection of nurses and relatives of patients. For it appears to be a beautiful property of this substance that a single administration of it to a healthy person, with no more pain than is occasioned by a subcutaneous injection of morphia, confers an immunity which, though not of very long duration, would be amply sufficient to protect those attending on a diphtheritic patient from an attack of the disease.

To meet this large demand will involve a very heavy expenditure which will severely tax our resources; and I beg to be allowed to appeal through your columns to the generosity of the public and urge them to contribute liberally to the funds of the institute.

Cheques should be made payable to the honorary treasurer, Sir Henry Roscoe; or to the director of the institute, Dr. M. Armand Ruffer, 101, Great Russell Street, London, W.C., and crossed "Coutts and Co."

CHESHIRE FARMERS AND SWINE FEVER.

A largely attended meeting of farmers was held at Nantwich recently to protest against the continued application of the restrictions relating to swine fever. The subject was introduced by Mr. James Sadler, secretary of the Nantwich Farmers' Club, who traced a certain amount of depression to the existence of the swine fever restrictions. So far from the slaughtering of animals being a check upon the spread of the disease it was a means by which persons whose pigs were thus treated were benefited, and he said that the money paid in compensation was recklessly squandered. It had come to his knowledge that one man whose pigs had been slaughtered and who had been handsomely compensated bought a second lot, having done which he called attention to the fact in order to have his pigs again slaughtered, and be again compensated. The whole difficulty lay in the fact that the regulations were controlled by the Board of Agriculture, many of whose officials living in London had never seen a pig in their lives. In conclusion he strongly urged the meeting to petition the authorities to relegate their duties to practical farmers who were members of the Cheshire County Council. Mr. John Williams, of Aston, pointing out the inconvenience of the regulations, said that recently a gentleman from Preston having bought some pigs at Crewe had to go to Preston and obtain a licence before he was allowed to remove them. The Government appointed a duly qualified vet. as an inspector, but notwithstanding anything that he might say to the contrary, it was one of the whims of the Board of Agriculture that the inside of the animal should be sent to London. If a person reported a case of swine-fever that day it would be Wednesday before he would have a reply, and if 20 pigs died in the interim, he would not have a halfpenny compensation. The difficulty was that many of the inspectors appointed in London know nothing about the disease. Only one case out of ten reported proved to be swine fever, and the cost of making the report was about £10. Mr. John Emberton, of Buerton, submitted the following resolution:—"That that meeting, as a large body of farmers, memorialise the Board of Agriculture that the whole of the management of the regulations and restrictions relating to swine fever be placed in the hands of the County Council." Mr. Robert Manley, Wrenbury, seconded the resolution, which was carried unanimously.—*Liverpool Courier.*

THE CONTAGION OF CANCER.

Any information capable of shedding a new light on the nature of that mysterious disease, cancer, is eagerly welcomed by the profession. Some facts in this connexion brought forward by Dr. Guelliot of Rheims at the Lyons Surgical Congress on Oct. 9th will accordingly be found interesting and instructive by the readers of *The Lancet*. The experiments of Hanau and those of Morau recently reported in *The Archives de Médecine Expérimentale* prove that cancer can be grafted on to animals of the same species. Experimental hetero-inoculation is thus an established fact; spontaneous or accidental hetero-inoculation is, therefore, possible. It is to clinical observation that inquirers must have recourse in order to clear up the question, and false deductions are more easily avoided when these observations are made in country districts where the pathological antecedents and mode of life of the population are well-known. The very unequal distribution of the disease is an extremely striking phenomenon. Thus 100,000 persons in Paris or Rheims supply 100 victims, the corresponding figures for a village in the Ardennes and a district of the Aisne respectively being 266 and 1400. Instances have again been known of the inhabitants of a particular district of a town or a group of houses being especially visited by the disease. Nay, habitations that may fitly be designated as cancer houses have been known to exist, where three or four denizens have been successively victims of cancer. Dr. Guelliot has collected fifteen such examples, yielding fifty victims. It would seem that nothing short of contagion could explain the foregoing. More instructive still are examples of cancerous affections appearing successively in two persons living constantly under the same roof (*cancer à deux*). Dr. Guelliot cites 103 such instances, 42 of these having been noted by himself. Of these 103 examples 14 had reference to co-lodgers, relatives, and masters and servants, and 89 (or more

than four-fifths) to husband and wife. The transmission may be direct (through penis and uterus), but more frequently it is effected indirectly through wearing apparel or table utensils. Twice inoculation occurred through a tobacco pipe. In more than one-half of 64 cases of *cancer à deux* the interval separating the appearance of tumours in the two persons was under two years. In 26 instances the cancer was homotopic (affecting the same organ); in 97 heterotopic. Dr. Guelliot opines that the influence of heredity is exaggerated. At most only 12·5 per cent. come under this heading, and if account be taken of persons who, born of cancerous parents, reach extreme old age the proportion is reduced to 5 or 6 per cent. (from the statistics of fifty old men ranging from seventy to ninety years of age). He knows of nine examples of practitioners attending special cases of cancer who contracted the disease. Dr. Guelliot concluded his powerful argument in favour of the contagious nature of cancerous tumours by remarking that, although the appreciation of the danger incurred by individuals brought into contact with patients of this class may frighten the public, it is always preferable to looks facts, especially disagreeable ones, in the face, and counteract risks of the kind by precautions based on the dictates of common sense.

R.A.S.E. and R.V.C.

At the meeting of the R.A.S.E. this week, the Veterinary Committee gave notice that at their next meeting they would move—(1) for the renewal of their annual grant of £600, of which £500 would be allocated to the Royal Veterinary College, and £100 reserved for general purposes; and (2) for the payment to the College, during 1895, of the special grant of £200 for the purposes of further investigations into abortion in cattle.

Personal.

Mr. Ernest F. de Jong, M.R.C.V.S., F.R.P.S., late Professor of Botany and Helminthology at the New College, Edingburgh, was presented in the Hotel Metropole, Edinburgh, on Saturday evening, Nov. 4th, with an illuminated address and case of medical instruments on the occasion of his resignation from that post and his entry into the medical profession. Mr. J. Nuttall, one of the senior students of the New Veterinary College, was in the chair. The students expressed their regret at his loss, and hoped that his success in the profession he was about to adopt would be as brilliant as that which he had achieved in the field of veterinary science. Mr. de Jong acknowledged the presentation, and a programme of music was enjoyed during the evening by a fairly large audience.

Mr. R. Roberts, M.R.C.V.S., read a paper recently on tuberculosis in cattle before a large and influential attendance of members of the Tunbridge Wells Farmers' Club assembled at the weekly meeting. The paper was of a very practical nature, and went fully into the question of contagion of the disease, the means by which it is spread, and the need of immediate steps being taken to stop its ravages. Considerable discussion took place, in which most of the practical agriculturists present took part, and in the end it was unanimously resolved:—"That this Club, having discussed the question of tuberculosis in cattle, earnestly urges upon the Board of Agriculture the necessity of taking immediate steps for combating the disease."

At the meeting of the Hackney Horse Society on Tuesday last, the committee recommended that Professor Axe be asked to act as Veterinary Inspector, and to furnish the Committee with the names of six eminent members of the profession for the Show Committee to select three gentlemen to assist him.

Mr. A. W. Hill, Registrar of the Royal College of Veterinary Surgeons is at present suffering from typhoid fever.

John Gamgee.—The profession will be sorry to hear that Professor John Gamgee is lying dangerously ill. Last reports were rather favourable, but we shall anxiously await further news. Although he has long since retired from active veterinary work his labours have left an ineffaceable mark on our science, and we should be ungrateful indeed if we lost interest in one of our greatest and most useful members.

CORRESPONDENCE

THE INSTITUTE OF PREVENTIVE MEDICINE.

Sir,

I have been looking over the report of last Council meeting and trying to see a way in which our representative body may act together and harmonise all their apparent contradictions. I say *apparent* because I do not think they are *real*, and I am sure every member wishes to do his best for the profession. I notice every member of Council approves the object of the Institute, everyone wishes to help forward the science of veterinary medicine, but the method of doing this is in dispute. Now the whole profession, and the whole Council, has for some years been insisting upon the necessity of a scholarship which will assist post-graduate students to complete their education.

Here is the opportunity—the British Institute of Preventive Medicine is being built, it will supply just the place we want. Let our Council form their scholarship and connect it with the Institute.—Yours truly,

Vis Unita Fortior.

"VETERINARY" CHEMIST.

Dear Sir,

Could you kindly inform me if anything can be done to prevent chemists, describing themselves in local papers and on their labels as "Veterinary Chemists" or using the words "Veterinary Drug Stores, advice free." There is no such degree as Veterinary Chemist. He should be a holder of the two diplomas — Pharmaceutical and Veterinary—to claim such a title.

We have two men in this town who are chemists and so mis-describe themselves, but who never passed any veterinary examination. Is it right to allow this and yet compel its removal from a blacksmith's shop. Why cannot we restrict a chemist to the use of his proper and true title?—Yours truly,

Fair Trade.

[It has been ruled in a superior court that a man may describe himself as a Veterinary Chemist if he sells veterinary medicines. He must not call himself a veterinary practitioner, nor must he prescribe and attend cases. We should be glad to know a Veterinary Chemist who treats diseases and prescribes.—Ed.]

Communications, Books, and Papers received:—Prof. Hobday, W. Burt, A. L. Gibson, C. Crowhurst, J. A. Robinson, F. W. Somers, B. Eggleton.

We shall be obliged by early intelligence of all matters worth bringing under the notice of the profession, and thankful to any friends who may send us cuttings from local papers, containing facts of interest.